

What is claimed is:

1 1. A method of parsing, in a message parser of a message processing system, a
2 plurality of messages comprising respective corresponding sets of data fields arranged in a
3 predetermined format, to extract a corresponding data field from each message, said format
4 being defined by format information stored in the system which indicates a name for each
5 data field in a said set, the method comprising:

6 in response to a handle request, indicating the name of a required data field, from a
7 component of the system, accessing the format information to determine the location of the
8 required data field in a said message, and supplying a handle, indicative of said location, to
9 said component; and

10 in response to subsequent parsing requests, each comprising the handle and a said
11 message, from said component, extracting the required data field from the message in each
12 parsing request according to the location indicated by the handle.

13 2. A method according to claim 1 wherein the handle comprises location data
14 defining said location.

15 3. A method according to claim 2 wherein the location data defines the offset of the
16 required data field in the message.

17 4. A method according to claim 3 wherein the location data further defines at least
18 one of the length and field type of the required data field.

19 5. A method according to claim 2 wherein each data field is tagged in the message
20 format and said format information indicates the respective tags corresponding to the names

of the data fields in said set, and wherein said location data comprises the tag corresponding to the required data field.

6. A method according to claim 1 including, in response to the handle request, storing location data defining said location, wherein the handle comprises data indexing the stored location data.

7. A method according to claim 6 wherein the location data defines the offset of the required data field in the message.

8. A method according to claim 7 wherein the location data further defines at least one of the length and field type of the required data field.

9. A method according to claim 6 wherein each data field is tagged in the message format and said format information indicates the respective tags corresponding to the names of the data fields in said set, and wherein said location data comprises the tag corresponding to the required data field.

10. A method according to claim 1 wherein the format information stored in said system defines the message format for a plurality of different types of message corresponding to respective different sets of data fields, and wherein the step of accessing the format information is performed in response to a handle request which indicates the name of the required data field and the message type for the messages to be parsed, to determine the location of the required data field in a message of that message type.

11. Message parsing apparatus for parsing a plurality of messages, comprising

2 respective corresponding sets of data fields arranged in a predetermined format, in a
3 message processing system, the apparatus comprising:

4 memory for storing format information defining said predetermined format and
5 indicating a name for each data field in a said set; and

6 a message parser responsive to a handle request, indicating the name of a required
7 data field, from a component of the system to access the format information to determine the
8 location of the required data field in a said message, and to supply a handle, indicative of
9 said location, to said component;

10 the message parser being further responsive to subsequent parsing requests, each
11 comprising the handle and a said message, from said component to extract the required data
12 field from the message in each parsing request according to the location indicated by the
13 handle.

12. Apparatus according to claim 11 wherein the handle comprises location data
2 defining said location.

13. Apparatus according to claim 12 wherein the location data defines the offset of the
2 required data field in the message.

1 14. Apparatus according to claim 13 wherein the location data further defines at least
2 one of the length and field type of the required data field.

1 15. Apparatus according to claim 12 wherein each data field is tagged in the message
2 format and said format information indicates the respective tags corresponding to the names
3 of the data fields in said set, and wherein said location data comprises the tag corresponding
4 to the required data field.

1 16. Apparatus according to claim 11 wherein the message parser is arranged to store
2 location data, defining said location, in the memory, and wherein the handle comprises data
3 indexing the stored location data.

1 17. Apparatus according to claim 16 wherein the location data defines the offset of the
2 required data field in the message.

1 18. Apparatus according to claim 17 wherein the location data further defines at least
2 one of the length and field type of the required data field.

1 19. Apparatus according to claim 16 wherein each data field is tagged in the message
2 format and said format information indicates the respective tags corresponding to the names
3 of the data fields in said set, and wherein said location data comprises the tag corresponding
4 to the required data field.

1 20. Apparatus according to claim 11 for parsing a plurality of different types of
2 message corresponding to respective different sets of data fields, wherein the format
3 information stored in the memory in use defines the message format for each of said
4 plurality of different message types, and wherein the message parser is arranged to access
5 the format information in response to a handle request which indicates the name of the
6 required data field and the message type for the messages to be parsed, to determine the
7 location of the required data field in a message of that message type.

1 21. A message processing system comprising:
2 message parsing apparatus for parsing a plurality of messages which comprise

3 respective corresponding sets of data fields arranged in a predetermined format, the
4 apparatus comprising memory for storing format information defining said predetermined
5 format and indicating a name for each data field in a said set, and a message parser
6 responsive to a handle request, indicating the name of a required data field, from a
7 component of the system to access the format information to determine the location of the
8 required data field in a said message, and to supply a handle, indicative of said location, to
9 said component, the message parser being further responsive to subsequent parsing requests,
10 each comprising the handle and a said message, from said component to extract the required
11 data field from the message in each parsing request according to the location indicated by
12 the handle; and

13 a message processing component for processing said plurality of messages, the
14 message processing component being arranged to generate said handle request and said
15 parsing requests for supply to the message parsing apparatus.

22. Message parsing apparatus for parsing messages in a message processing system
 wherein the messages comprise respective sets of data fields and the data fields of each
 message are arranged in one of a plurality of predetermined formats, the apparatus
 comprising:

5 memory for storing format information defining said predetermined formats and
6 indicating a name for each data field in a said set;

7 a plurality of message parsers, each adapted for parsing messages having a
8 corresponding one of said formats; and

9 a parsing manager for managing communications between the message parsers and
10 at least one message processing application of the system;

11 wherein each message parser is responsive to a handle request, indicating the name
12 of a required data field, from the parsing manager to access the format information to

determine the location of the required data field in a message in the corresponding format for that parser, and to supply a parsing handle, indicative of said location, to the parsing manager, and is further responsive to subsequent parsing requests from the parsing manager, each comprising the parsing handle and a message in said corresponding format, to extract the required data field from the message in each parsing request according to the location indicated by the parsing handle;

and wherein the parsing manager is arranged to perform said managing of communications such that, for a series of messages, comprising respective corresponding sets of data fields having the same one of said formats, which are received from said application and from each of which a corresponding data field is required, the parsing manager issues a said handle request to the parser corresponding to that format, and then, for each message, issues a said parsing request to that parser, whereby the required data field is extracted from each message of the series.

23. Apparatus according to claim 22 wherein:

the parsing manager is responsive to a handle request, indicating the name of the required data field, from said message processing application, to supply the handle request to each of the message parsers, to store the parsing handles received from the parsers in the memory, and to supply a manager handle associated with the stored parsing handles to said application; and

the parsing manager is further responsive to each of subsequent parsing requests, comprising the manager handle and respective messages of said series of messages, received from the application, to identify the message format from the message in the received parsing request, to select, from the stored parsing handles associated with the manager handle, the parsing handle for the parser corresponding to the identified format, and to supply a parsing request, comprising the selected parsing handle and the message in the

received parsing request, to that parser.

24. Apparatus according to claim 22 wherein:

the parsing manager is responsive to a handle request, indicating the name of the required data field, from said message processing application, to supply a manager handle to the application; and

the parsing manager is responsive to the first of subsequent parsing requests from the application, each comprising the manager handle and one of said series of messages, to identify the message format from the message in the first parsing request, to supply a handle request to the message parser corresponding to the identified format, to store the parsing handle returned by the corresponding parser in the memory in association with said manager handle, and to supply a parsing request, comprising said parsing handle and the message in said first parsing request, to said corresponding parser; and

the parsing manager is responsive to each further one of said subsequent parsing requests received from the application to identify the stored parsing handle associated with the manager handle, and to supply a parsing request, comprising that parsing handle and the message in the received parsing request, to said corresponding parser.

25. Apparatus according to claim 22 wherein the format information stored in the memory in use defines said predetermined formats for each of a plurality of different types of message corresponding to respective different sets of data fields, and wherein each message parser is arranged to access the format information in response to receipt from the parsing manager of a handle request which indicates the name of the required data field and the message type for the messages to be parsed, to determine the location of the required data field in a message of that message type.

1 26. Apparatus according to claim 23 wherein the parsing manager comprises a
2 processor configured by computer program code means to perform said managing of
3 communications between the message parsers and said message processing application.

1 27. Apparatus according to claim 24 wherein the parsing manager comprises a
2 processor configured by computer program code means to perform said managing of
3 communications between the message parsers and said message processing application.

1 28. A message processing system comprising:
2 message parsing apparatus according to claim 23; and
3 a message processing application for processing said series of messages;
4 wherein the message processing application is arranged to generate the handle
5 request and parsing requests to which the parsing manager is responsive.

1 29. A message processing system comprising:
2 message parsing apparatus according to claim 24; and
3 a message processing application for processing said series of messages;
4 wherein the message processing application is arranged to generate the handle
5 request and parsing requests to which the parsing manager is responsive.

1 30. A computer program product comprising a computer usable medium having
2 embodied therein computer readable program code means for causing a processor of a
3 message processing system to perform a method of parsing a plurality of messages, which
4 comprise respective corresponding sets of data fields arranged in a predetermined format, to
5 extract a corresponding data field from each message, said format being defined by format
6 information stored in the system which indicates a name for each data field in a said set, the

method comprising the steps of:

in response to a handle request, indicating the name of a required data field, from a component of the system, accessing the format information to determine the location of the required data field in a said message, and supplying a handle, indicative of said location, to said component; and

in response to subsequent parsing requests, each comprising the handle and a said message, from said component, extracting the required data field from the message in each parsing request according to the location indicated by the handle.

1 31. A computer program product comprising a computer usable medium having
2 embodied therein computer readable program code means for loading in said processor of
3 apparatus according to claim 26 to configure the processor to perform said managing of
4 communications.

5 32. A computer program product comprising a computer usable medium having
6 embodied therein computer readable program code means for loading in said processor of
7 apparatus according to claim 27 to configure the processor to perform said managing of
8 communications.